REMARKS

Claims 1-6, 8-11, 13-15, and 17-33 are currently pending in the application. Of these claims, claims 1, 10, 20, and 28 are independent.

Claim Objection

Claim 25 is objected to because it lacks antecedent basis for "the architectural state".

Applicant respectfully submits this objection has been overcome by the above amendment to claim 25 and should accordingly be withdrawn.

Rejections

Claims 1-6, 10-11, 13-15, 20-22, and 27-31 are rejected under 35 U.S.C. § 102(b) as being anticipated by Rotenberg et al., "Trace Cache: A Low Latency Approach to High Bandwidth Instruction Fetching" ("Rotenberg").

Claims 8-9, 17-19, and 32-33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Rotenberg in view of Vajapeyam et al., "Improving Superscalar Instruction Dispatch And Issue By Exploiting Dynamic Code Sequences" ("Vajapeyam").

Claims 23-24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Rotenberg in view of U.S. Patent No. 6,427,204 B1 to Arimilli et al. ("Arimilli").

Claims 25-26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Rotenberg in view of U.S. Patent No. 6,018,798 to Witt et al. ("Witt").

Applicant respectfully traverses these rejections as follows.

Independent claim 1 recites control flow logic to dispatch to data flow logic a dependency descriptor, the data flow logic to receive the dispatched dependency descriptor, to fetch an instruction sequence using an address from the received dependency descriptor, and to execute the instruction sequence according to the dependency information in the received dependency descriptor.

Independent claim 10 recites data flow logic to receive a dependency descriptor dispatched from the control flow logic, to fetch an instruction sequence corresponding to the

received dependency descriptor, and to execute the fetched instruction sequence according to dependency information in the received dependency descriptor.

Independent claims 20 and 28 recite dispatching a dependency descriptor for execution, fetching a set of instructions using an address from the dispatched dependency descriptor, and executing the set of instructions according to dependency information in the dispatched dependency descriptor.

Applicant respectfully submits none of the references cited in these rejections, whether alone or in any combination with one another, taught or suggested such features as claimed.

Applicant respectfully submits that instructions fetched using a trace fall-through or target address in Rotenberg are not executed according to the branch flags or branch mask in the trace cache entry from which the trace fall-through or target address is obtained.

Noting the remaining rejected claims depend from independent claim 1, 10, 20, or 28, Applicant therefore respectfully submits these rejections have been overcome and should accordingly be withdrawn.

Note that there may be additional reasons for the patentability of claims. For example, there may be additional reasons why the dependent claims are patentable.

It is respectfully submitted this patent application is in condition for allowance, for which early action is earnestly solicited.

The Examiner is invited to telephone the undersigned to help expedite the prosecution of this patent application.

Respectfully submitted,

Date: March 8, 2006

/Matthew C. Fagan, Reg. No. 37,542/
Matthew C. Fagan
Registration No. 37,542
Telephone: (512) 732-3936
Facsimile: (512) 732-3912 (please call first)

c/o Blakely, Sokoloff, Taylor & Zafman, L.L.P.
12400 Wilshire Boulevard, Seventh Floor
Los Angeles, California 90025
Telephone: (503) 439-8778
Telephone: (310) 207-3800